

CLAIMS

1. - Multispot satellite communication system in a multimedia
broadcasting network, which comprises at least one broadcasting unit (1)
capable of setting up bidirectional communication with a satellite (S) and at
5 least one user unit (2) capable of setting up bidirectional communication with
said satellite (S), said bidirectional communication comprising a downlink
direction (P2; U2; C2) of transmitting from said satellite (S) and an uplink
direction (P1; U1; C1) of transmitting to said satellite (S), **characterised** in
that said communication in the uplink direction (P1; U1; C1) contains at least
10 one return channel to the satellite and said communication in the downlink
direction (P2; U2; C2) is suitable for being processed directly by the user unit
(2) by means of a receiver/decoder device that forms part of said unit.

2. - System according to claim 1, **characterised** in that it comprises at
least one regenerator means (4) for multiplexing the communication in the
15 uplink direction (P1; U1) producing a signal for carrying out the
communication in the downlink direction (P2; U2).

3. - System according to any one of the preceding claims,
characterised in that said return channel is suitable for carrying information
generated in the broadcasting unit (1) or in the user unit (2).

20 4. - System according to claim 1, **characterised** in that it also
comprises a control unit (3) suitable for performing network control and
management functions.

5. - System according to claim 4, **characterised** in that said control
unit is suitable for establishing communication with the satellite (S) in the
25 uplink direction (C1) and in the downlink direction (C2) of the type of the
respective communications of claim 1.

6. - Regenerator unit (4) to be included in the system of claim 1,
characterised in that it comprises at least one demultiplexing means (41) for
demultiplexing uplink channels (P1; U1; C1), at least one multiplexing means
30 (43) for multiplexing information bits to be sent in a channel in the downlink
direction (P2, U2; C2) and at least one formatting means (44) for giving
format to said channel in the downlink direction in such a manner that it is
suitable for being processed directly by a user unit (2) by means of a
receiver/decoder device that forms part of said unit.

35 7. - Method for carrying out multispot satellite communication in a

multimedia broadcasting network that comprises at least one broadcasting unit (1) capable of setting up bidirectional communication with a satellite (S) and at least one user unit (2) capable of setting up bidirectional communication with said satellite (S), said bidirectional communication being
5 carried out in a downlink direction (P2; U2, C2) of transmission from said satellite (S) and an uplink direction (P1; U1; C1) of transmission to said satellite (S), **characterised** in that said communication in the uplink direction (P1; U1; C1) contains at least one return channel to the satellite and said communication in the downlink direction (P2; U2; C2) may be processed
10 directly by the user unit (2) by means of a receiver/decoder device that forms part of said unit.